AMERICAN MILL BRIDGE
3.0 Miles East and 1.5 Miles South of
Intersection of Routes H and 71
Carthage Vicinity
Jasper County
Missouri

HAER No. MO-25

PHOTOGRAPHS

HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Rocky Mountain Regional Office
Department of the Interior
P.O. Box 25287
Denver, Colorado 80225

HISTORIC AMERICAN ENGINEERING RECORD
AMERICAN MILL BRIDGE

I. INTRODUCTION

Location:	Spanning Center Creek in the Carthage vicinity, 5 miles southeast of the Jasper County courthouse, Missouri (3.0 miles east and 1.5 miles south of the intersection of Routes H and 71).
Quad:	Fidelity
UTM:	A 15/4108560N/388265 E B 15/4108590N/388265 E
Date of Construction:	1886 (North abutment modified in 1893).
Present Owner:	Jasper County Jasper County Courthouse Carthage, Missouri
Present Use:	Vehicular bridge to be replaced by a new vehicular bridge. Projected date of removal: early fall 1985. Metal truss and stone abutments to be retained and reconstructed as a pedestrian bridge at a site over Frene Creek in Hermann, Missouri (Gasconade County).
Significance:	The American Mill Bridge is a single span steel and wrought iron Pratt through truss bridge and one of the earliest surviving intact examples in southern Missouri. It was fabricated by the Missouri Valley Bridge and Iron Company of Leavenworth, Kansas.
Historian:	Mark S. Kross, Archaeologist, Missouri Highway and Transportation Department, July, 1985.

II. HISTORY

A. NINETEENTH CENTURY BRIDGE BUILDING IN JASPER COUNTY

Prior to the Civil War, bridge construction in Jasper County was likely done by individuals or a group of individuals who built small, private wooden structures to span minor streams. Larger streams were crossed at fords which generally acquired the names of adjacent landowners or of natural features (e.g., Madill Ford, Rock Ford).

Court records dating from 1841 [1] reveal that the Jasper County Court appointed commissioners to oversee those roads designated as county thoroughfares. Additional routes were added to the road system based on needs apparent to the court or else on petitions presented to the court by interested individuals or groups. Petitions for bridges were also presented to the court for consideration.

The Jasper County Court let separate contracts for construction of three bridges in 1869. Other bridges were built in the 1870's. On August 20, 1877, all county bridges were attached to specific road districts for maintenance and repair [2]. Six bridges were mentioned in reference to this act. Private individuals were requesting remuneration from the court for bridges they had built themselves [3]. Funds were being appropriated by the court for the repair and reconstruction of older wooden bridges [4]. In the 1880's and 1890's the number of private bridge petitions increased. Bridge building in Jasper County

reflected this. Over eleven bridges were built in the 1880's and about thirty in the 1890's.

The county generally let separate contracts for each stage of the bridge construction project. The approach fills and rip-rap were constructed. Then the masonry substructure (piers and abutments) were built. Later bridges had concrete and steel substructures. Approach trestles were built. A contract for the fabrication of the wood or metal truss was let. Most of these contracts were let by competitive bidding, and at times all bids were rejected. The successful bidder usually put up a bond to cover the proposed costs; this bond was often twice the contract total in the initial years of bridge building. After construction and approval by the county road and bridge commissioner, the bonds would be released and the contractors would be paid.

Contracts for repairs and maintenance to county bridges were let in a similar fashion and duly entered in the county record. After 1907 the entries for repairs and materials were described in a general manner and the bridges were not usually named.

B. CONSTRUCTION CHRONOLOGY

On June 21, 1886, the county court ordered the bridge commissioner to let contracts for three bridges, including a new iron bridge over Center Creek at Norris Mill (i.e., American Mill) near the section line on the east side of Section 25, T28N, R31W. These contracts were

to be let "on the condition that the citizens interested in the building of said bridges and the petitioners for the same, shall enter into bond to build suitable approaches to such bridges and secure the right-of-way where the same is not located on the line of an established road" [5]. On July 6, G. N. Grieb and others presented the court with a bond for approaches and rip rap necessary for an iron bridge at Norris Mill. This bond was approved by the court [6].

The bridge commissioner reported on the work continuing at Norris Mill on July 29, 1886. He also submitted the contract of H. H. Stewart and B. F. Jacobs for masonry work at the bridge site. This contract for $790.00 was approved by the court [7]. On August 9, 1886, A. McSouth, an agent for the Missouri Valley Bridge and Iron Works of Leavenworth, Kansas, presented the court with a $1500.00 contract for the construction of a wrought iron truss bridge at Norris Mill. A. J. Tullock, James W. Gaw, and L. Y. Mickles secured the $3000.00 bond presented to the court [8].

The bridge commissioner had inspected and approved the masonry work at Norris Mill by December 4, 1886. He submitted his report and the court records read as follows: "And it appearing to the satisfaction of the court, from said report, that said work has been completed according to the plans and specifications for the construction of the same, it is, therefore, ordered that said report be received, approved and orderly fixed" [9]. A warrant issue of $225.00 for the balance of the masonry work was presented to Stewart and Jacobs. The Missouri

Valley Bridge and Iron Works was presented a warrant issue for $1500.00.

Later entries about the bridge concern maintenance and repair work. The first reference in the court records which referred to the American Mill Bridge by that name was on October 24, 1893 [10]. George Bradford, the Jasper County bridge commissioner, was asked by the court to estimate the cost for reflooring the bridge and repairing its abutments. His estimate was $234.00. The court ordered that the work be advertised and let. David Miller won the contract on November 20, 1893, for $169.00 [11]. By December 23, 1893, the bridge commissioner had inspected and approved Miller's work [12].

In October, 1897, the court reviewed David Miller's account. He had refloored the American Mill Bridge for $15.00. He had repainted 150 square feet of it at $0.18 per square foot (i.e., $27.00) and had repointed 30 yards of the walls at $0.20 per yard ($6.00) [13].

In 1902 the bridge commissioner presented estimates to the court for reflooring, repairing, and repainting the American Mill Bridge [14]. In August, David Miller was paid $500.00 as a partial payment for a 32-foot span at the American Mill Bridge [15]. It is not clear if this span was part of the American Mill Bridge or if it was a separate span over the millrace immediately south. In 1903 Miller received additional money for work completed at the American Mill Bridge and others [16]. On March 24, 1905, S. Swingle was paid $5.60 for labor

at the American Mill Bridge [17]. John O'Connor received $4.00 on March 8, 1906 for repairing the bridge abutments [18]. Swingle was paid $43.50 on April 16, 1906 [19] and $7.30 on May 7, 1906 [20] for repairs to the bridge. The final entry in the court records which mentions the American Mill Bridge specifically was on June 4, 1906 when $3.00 was paid to Drake Hardware for materials used in the repair of the bridge [21]. Records through 1923 [22] mention expenditures for general repairs to unspecified bridges.

C. LOCATION

An 1876 Atlas showed no bridge or structures in the vicinity of the present bridge location [23]. A road did exist near the section line in an alignment like today's road. An 1895 Atlas showed a "Smith Shop Grist Mill" in Section 25 [24]. Perhaps both a smithy and a mill occurred near each other but were undifferentiated on the Atlas map. A dam crossed Center Creek in the southwest quarter of Section 30.

An 1883 history [25] contained a biography of Mr. Samuel A. Norris who was proprietor of Pleasant Grove Mills at the time. He had arrived in Jasper County in 1880 and had purchased a site on Center Creek where he began construction of Pleasant Mills. The mill had three run of burs for both corn and wheat when it began operating in September, 1881. Norris also established a mercantile house for the use of the area's people.

In the winter of 1883, a post office was established there and Mrs. Norris became the postmistress [26]. It was named Flornoy and maps of the 1880's illustrated the location [27]. One source indicated that the mill at Flornoy operated until 1914. In about 1940 the mill superstructure was moved 0.7 mile southwest of its original location to be used as a barn [28].

Flornoy was probably just a postal station consisting of the mill, the mercantile house, and the house of the Norris family. There is no evidence that a town existed there. People likely used the post office as they came to the mill and mercantile house. The post office was closed at an undisclosed date in the past. The cultural environment in the bridge's vicinity now has a frame residence southeast of the bridge and an associated outbuilding. These are on land once encircled by the creek and the millrace. This millrace is now overgrown with brush and timber. The mill was originally located from 1000 to 1500 feet southeast of the American Mill Bridge.

III. THE BRIDGE

A. DESCRIPTION

The American Mill Bridge is a single span Pratt high through truss. The six panel pin connected structure has diagonal members in tension and vertical members in compression, except for the hip vertical adjacent to the inclined end posts. The bridge is 89.0 feet long,

12.0 feet wide (curb to curb), and 14.3 feet high (vertical clearance over deck). Rods are used for the tension members, the top lateral bracing, and the bottom lateral bracing. The vertical compression members, inclined end posts, and top cords are made of laced channel steel. Reinforced rolled steel is riveted to the upper side of the inclined end posts and the top chords. The upper struts and floor beams are channel steel. The bridge portals are laced. The lower chords are eyebars pinned to the verticals; the floor beams are held to the pins by U-bolts.

The bridge has no metal ornamentation. A bridge plate at the north portal reads as follows:

MO. VALLEY BRIDGE
&
IRON WORKS
1886
INSLEY SHIRE & TULLOCK
LEAVENWORTH, KAN.

An examination of the bridge to determine its metal composition was completed on July 2, 1984 [29]. The study indicated that the main beams and truss are primarily steel. Some members are wrought iron. Some cast iron fittings were also used.

The bridge deck is made of rough sawn timber planks of various dimensions. They are laid from curb to curb on their broader sides. The deck is nailed to seven plank stringers set on end upon the floor beams.

The truss is set upon rough cut limestone abutments. The two corners of each abutment which face Center Creek have been tooled to make a

distinct corner. The northern abutment has had an addition built on its upstream side. This addition is of smaller roughcut fieldstone. It was likely added to prevent the undermining of the original abutment. The addition might have been added in 1893.

B. MODIFICATIONS

Except for the abutment addition, the American Mill Bridge is essentially unaltered. The bridge deck has been replaced periodically. The metal truss has been repainted, and the abutments have been repointed. Fittings on the interior side of the vertical members indicate that a siderail was probably attached. The plate at the south portal is missing.

C. OWNERSHIP AND FUTURE

The American Mill Bridge has been owned and maintained by Jasper County since 1886. It is on 11th Street, a county highway. The county bridge inventory route number is 413 and the inventory bridge number is 413001.5. A structural appraisal of the American Mill Bridge revealed that it is structurally insufficient and functionally obsolete. The steel truss is covered with rust. It has suffered collision damage; some of the vertical members are bent. The stone masonry substructure is deteriorating as is the wooden deck. The width is insufficient to handle some traffic. Because of its condition, a decision was made to replace the bridge.

Alternate alignments were proposed to miss the bridge and leave it closed but in place. However, the most cost-effective alternate impacted the northern end of the American Mill Bridge, and the decision was made to remove the bridge.

As the proposed bridge replacement project progresses, the American Mill Bridge metal truss and stone abutments will be matchmarked, disassembled, and transported to Hermann, Missouri. There it will be reassembled over Frene Creek for use as a pedestrian bridge. First Missouri Bank of Gasconade County has accepted responsibility for the transport and reassembly of the bridge in an appropriate setting.

IV. BIOGRAPHICAL MATERIAL

A. THE MISSOURI VALLEY BRIDGE AND IRON WORKS

The Missouri Valley Bridge and Iron Works was located in Leavenworth, Kansas. The company likely built many bridges in Missouri, Kansas and Nebraska. Apparently the company began operating in 1876 [30]. Jasper County Court records indicate that the firm built five bridges in the county between 1881 and 1891, including the American Mill Bridge. Three of the five in Jasper County remain standing; two are in use today. In southern Missouri, the company also built bridges in Barton County, Vernon County, and Phelps County. The bridge in Phelps County was built in 1911. This indicates that the company was apparently in operation from 1876 to at least 1911. Insley, Shire and Tullock were

the proprietors of the company in the mid 1880's. A. J. Tullock was listed as the sole proprietor in 1890 [31]. The annual operating capacity of the company in 1894 was 20,000 long tons. In 1896, 1898, and 1903 the annual capacity was listed as 12,000 long tons [32].

V. ENDNOTES

1. Proceedings of the Jasper County Court, Book A.
2. Proceedings, Book I, pp. 373-374.
3. Ibid., Book H, p. 56.
4. Ibid., Book H, p. 468.
5. Ibid., Book N, p. 55.
6. Ibid., Book N, p. 68.
7. Ibid., Book N, p. 74.
8. Ibid., Book N, pp. 94-95.
9. Ibid., Book N, p. 159.
10. Ibid., Book S, p. 273
11. Ibid., Book S, pp. 340-341.
12. Ibid., Book S, p. 382.
13. Ibid., Book W, p. 288.
14. Ibid., Book 27, pp. 585-586
15. Ibid., Book 28, pp. 53-54.
16. Ibid., Book 29, p. 20
17. Ibid., Book 31, p. 34.
18. Ibid., Book 32, p. 106.
19. Ibid., Book 32, p. 168
20. Ibid., Book 32, p. 178.

21. Ibid., Book 32, p. 242.

22. Ibid., Book 49

23. An Illustrated Historical Atlas Map of Jasper County, Missouri. Brink, McDonough and Company, 1876.

24. Atlas of Jasper County, 1895.

25. History of Jasper County. Mills and Company, 1883, pp. 741-742.

26. Ibid., p. 723.

27. Missouri State Gazetteer and Business Directory, R. L. Polk and Company and A. C. Danser, Detroit and St. Louis, Volume IV, 1883-1884.

28. Zarins, J. and S. Burgess,
"A Stage I Cultural Resources Assessment of the Proposed Prosperity Lake Project Area, Jasper County, Missouri: 1978". Center for Archaeological Research Project CAR-138, Southwest Missouri State University, Springfield.

29. Missouri Highway and Transportation Department internal correspondence dated July 11, 1984.

30. Darnell, Victor A., "Directory of American Bridge - Building Companies 1840-1900". Society for Industrial Archaeology Occasional Publication No. 4, Washington, D. C., 1984, p. 17.

31. Ibid.

32. Ibid., p. 78